

REMARKS

The Office Action in the above-identified application has been carefully considered and this amendment has been presented to place this application in condition for allowance. Accordingly, reexamination and reconsideration of this application are respectfully requested.

Claims 1-8 and 10-12 are in the present application. It is submitted that these claims were patentably distinct over the prior art cited by the Examiner, and that these claims were in full compliance with the requirements of 35 U.S.C. § 112. Changes to the claims, as presented herein, are not made for the purpose of patentability within the meaning of 35 U.S.C. sections 101, 102, 103 or 112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

Claims 1-6, 8, and 10-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya (U.S. Patent 6,175,772) in view of Lund et al. (Article entitled "Adaptive LEGO Robots").

As noted by the Examiner, the previously presented claims did not specifically recite certain features of the invention that were argued in the previous amendment. (Office Action page 3) In response, Applicants' have amended the claims to recite that the present invention's "changing means changes the transition probability in the probability automaton by calculating a new transition probability according to transition probability equations wherein the transition probability is multiplied by an improvement ratio if the stimulus detected by said stimulus detection means is evaluated as being good and by a lowering ratio if the stimulus is evaluated as not being good." (Claim 1, Claims 11 and 12 contain similar limitations) These limitations are

supported by the probability equations shown in steps S8 and S9 of Figure 6 and described on pages 15-16 of the specification.

As indicated by the Examiner, “Kamiya does not teach the behavioral model as a probability automaton prescribed by a state corresponding to a behavior and a transition probability of the state.” (Office Action page 4) Rather, the Examiner contends Lund’s behavior set and behavior engine, as taught on page 1021, meet these limitations.

However, Lund’s behavior set is “implemented by a neural network” or “by a few lines of deterministic code.” (Lund, page 1021, second column, lines 9-12) As discussed in the specification, the present invention’s probability automaton is an alternative to the use of a neural network to configure a behavior model. (Specification page 4, lines 1-2) Hence, the present invention specifically distinguishes itself from models which are configured by neural networks as taught in Lund.

Moreover, the present invention uses a probability automaton with the transition probability being calculated according to transition probability equations. These equations include multiplying by an improvement ratio if the stimulus detected by the stimulus detection means is evaluated as being good and by a lowering ratio if the stimulus is evaluated as not being good. Whereas, Lund discloses a behavior set selector which “ranks the behavior sets available” by scores “determined by the distance between the current sensor and the state values and the values stored in the behavior set” (Lund, page 1021, second column, lines 24-28). Hence, Lund’s behavior sets are not transitioned based on probability equations as in the present invention, but rather on scored rankings. Furthermore, Lund does not disclose the use of “an improvement ratio” or “a lowering ratio” as required by the present invention.

Accordingly, for at least this reason, Kamiya and Lund fail to meet the present invention's probability automaton and the rejected claims should now be allowed.

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya in view of Fujita et al. (U.S. Patent 5,966,690) The Examiner relies on Fujita solely to meet the present invention's speech recognition dictionary feature. However, like Kamiya, Fujita fails to meet the present invention's probability automaton limitation for the reasons discussed above. Accordingly, the combination of Kamiya and Lund fails to obviate the present invention.

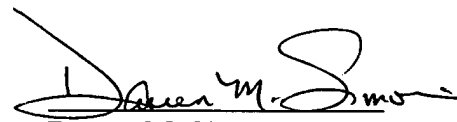
In view of the foregoing amendment and remarks, it is respectfully submitted that the application as now presented is in condition for allowance. Early and favorable reconsideration of the application are respectfully requested.

No additional fees are deemed to be required for the filing of this amendment, but if such are, the Examiner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account No. 50-0320.

If any issues remain, or if the Examiner has any further suggestions, he/she is invited to call the undersigned at the telephone number provided below. The Examiner's consideration of this matter is gratefully acknowledged.

Respectfully submitted,
FROMMER LAWRENCE & HAUG LLP

By:

A handwritten signature in black ink, appearing to read "Darren M. Simon", written over a horizontal line.

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